

CLAIMS

What is claimed is:

5 of: 1. A method for forming an image, the method comprising the steps

(a) imaging an imageable element and forming an imaged imageable element, the imaged imageable element comprising imaged regions and unimaged regions in an imageable layer;

in which:

10 the imageable element is imaged either with ultraviolet radiation, with infrared radiation, or with heat,

the imageable element comprises:

a substrate comprising a hydrophilic surface, and

the imageable layer over the hydrophilic surface, and

15 the imageable layer comprises an imageable composition that comprises:

a latent Brönsted acid,

a water-soluble or water-dispersible binder, and

an acid-activated cross-linking agent;

20 (b) heating the imaged imageable element; and

(c) developing the imaged imageable element with water and removing the unimaged regions.

2. The method of claim 1 in which the water-soluble or water-dispersible binder is a vinylpyrrolidone/vinyl acetate copolymer.

25 3. The method of claim 2 in which the latent Brönsted acid is a water-soluble onium salt.

4. The method of claim 3 in which the latent Brönsted acid is a diazonium salt.

5. The method of claim 4 in which the acid-activated cross-linking

agent is a melamine resin.

6. The method of claim 5 in which the element is imaged with ultraviolet radiation.

7. The method of claim 5 in which imageable composition additionally
5 comprises a photothermal conversion material and the element is imaged with infrared radiation.

8. The method of claim 5 in which the element is imaged with heat.

9. The method of claim 1 in which the latent Brönsted acid is a water-soluble onium salt.

10. The method of claim 9 in which the latent Brönsted acid is a diazonium salt.

11. The method of claim 10 in which the acid-activated cross-linking agent is a melamine resin.

12. The method of claim 1 in which the acid-activated cross-linking
15 agent is a melamine resin.

13. The method of claim 1 in which (i) the imageable composition additionally comprises a photothermal conversion material, and (ii) the element is imageable with ultraviolet radiation, with infrared radiation, and with heat.

14. The method of claim 13 in which the water-soluble or water-dispersible binder is a vinylpyrrolidone/vinyl acetate copolymer.
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15. The method of claim 14 in which the latent Brönsted acid is a water-soluble onium salt.

16. The method of claim 15 in which the latent Brönsted acid is a diazonium salt.

17. The method of claim 16 in which the acid-activated cross-linking
25 agent is a melamine resin.

18. The method of claim 17 in which the water-soluble onium salt is 2-

methoxy-4-aminophenyl diazonium hexafluorophosphate.

19. The method of claim 13 in which the latent Brönsted acid is a water-soluble onium salt.

20. The method of claim 19 in which the latent Brönsted acid is a diazonium salt.

21. The method of claim 20 in which the acid-activated cross-linking agent is a melamine resin.

22. The method of claim 13 in which the acid-activated cross-linking agent is a melamine resin.

23. An image formed by a method comprising the steps of:
(a) imaging an imageable element and forming an imaged imageable element, the imaged imageable element comprising imaged regions and unimaged regions in an imageable layer;

in which:

the imageable element is imaged either with ultraviolet radiation, with infrared radiation, or with heat,

the imageable element comprises:

a substrate comprising a hydrophilic surface, and

the imageable layer over the hydrophilic surface, and

the imageable layer comprises an imageable composition that comprises:

a latent Brönsted acid,

a water-soluble or water-dispersible binder, and

an acid-activated cross-linking agent;

(b) heating the imaged imageable element; and

(c) developing the imaged imageable element with water and removing the unimaged regions.

24. The image of claim 23 in which:

the water-soluble or water-dispersible binder is a vinylpyrrolidone/vinyl

acetate copolymer;

the latent Brönsted acid is a water-soluble onium salt.; and

the acid-activated cross-linking agent is a melamine resin.

----- 25. The image of claim 24 in which the water-soluble onium salt is a
5 diazonium salt.

26. An imageable element comprising:

a substrate comprising a hydrophilic surface, and

the imageable layer over the hydrophilic surface,

in which the imageable layer comprises an imageable composition that

10 comprises a latent Brönsted acid, a water-soluble or water-dispersible binder,
and an acid-activated cross-linking agent.

27. The imageable element of claim 26 in which:

the water-soluble or water-dispersible binder is a vinylpyrrolidone/vinyl
acetate copolymer;

15 the latent Brönsted acid is a water-soluble onium salt.; and
the acid-activated cross-linking agent is a melamine resin.

28. The imageable element of claim 27 in which the water-soluble
onium salt is a diazonium salt.

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